DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CARRIGAIN POND	Lake Area (ha):	2.83
Town: LINCOLN	Maximum depth (m):	9.0
County: Grafton	Mean depth (m):	3.3
River Basin: Merrimack	Volume (m³):	94500
Latitude: 44°05'13" N	Relative depth:	4.8
Longitude: 71°27'41" W	Shore configuration:	
Elevation (ft): 3190	Areal water load (m/yr):	13.46
Shore length (m): 500	Flushing rate (yr ⁻¹):	4.00
Watershed area (ha): 33.7	P retention coeff.:	0.52
% watershed ponded: 0.0	Lake type: n	atural

BIOLOGICAL:	23 August 1994
DOM. PHYTOPLANKTON (% TOTAL) #1	NO PHYTOPLANKTON
#2	SAMPLES COLLECTED
#3	
PHYTOPLANKTON ABUNDANCE (units/mL)	
CHLOROPHYLL-A (µg/L)	3.63
DOM. ZOOPLANKTON (% TOTAL) #1	NO ZOOPLANKTON
#2	SAMPLES COLLECTED
#3	
ROTIFERS/LITER	
MICROCRUSTACEA/LITER	
ZOOPLANKTON ABUNDANCE (#/L)	
VASCULAR PLANT ABUNDANCE	Scattered
SECCHI DISK TRANSPARENCY (m)	4.3
BOTTOM DISSOLVED OXYGEN (mg/L)	1.8
BACTERIA (E. coli, #/100 ml) #1	23
#2	
#3	

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 5.6 Hypolimnion volume (m^3) : 4000 Anoxic volume (m^3) : None

CHEMICAL:	CARRIGAIN LINCOLN	N POND	
	23 1	August 199)4
DEPTH (m)	1.0	4.0	7.0
pH (units)	5.6	5.4	5.4
A.N.C. (Alkalinity)	0.6	1.4	0.6
NITRATE NITROGEN	0.08	0.06	0.11
TOTAL KJELDAHL NITROGEN	 0.13	0.16	0.26
TOTAL PHOSPHORUS	0.008	0.008	<0.001
CONDUCTIVITY (µmhos/cm)	18.5	17.6	18.1
APPARENT COLOR (cpu)	55	55	58
MAGNESIUM	0.11		
CALCIUM	1.3		
SODIUM	0.7		
POTASSIUM	0.48		
CHLORIDE	< 2	< 2	< 2
SULFATE	4	4	4
TN : TP	26	28	
CALCITE SATURATION INDEX	5.8		

All results in mg/L unless indicated otherwise

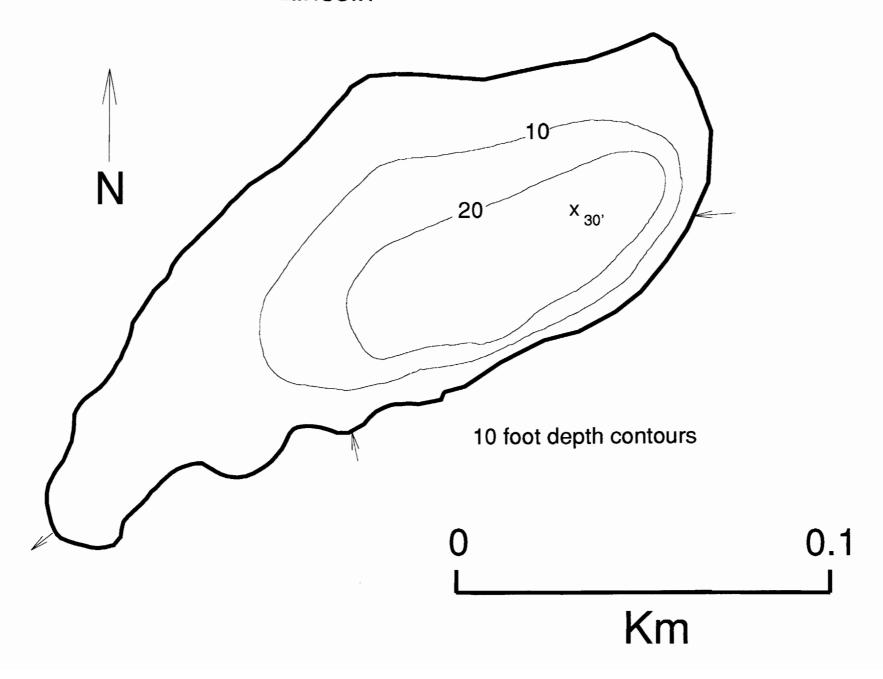
TROPHIC CLASSIFICATION: 1994

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
1	2	1	0	4	Oligo.

COMMENTS:

- This is a remote, high elevation pond in the White Mountain National Forest that was sampled jointly with the NH Fish and Game Department. It has been sampled annually since 1985 by helicopter for acid rain related parameters.
- 2. Access is by bushwhacking; there is no trail to the pond.
- 3. The pond was not sampled during the winter.
- 4. This is a tea-colored acid pond with little buffering capacity. No fish were collected in Fish and Game's nets.

Carrigain Pond



FIELD DATA SHEET

LAKE: CARRIGAIN POND

DATE: 08/23/94

TOWN: LINCOLN WEATHER: CLEAR & SUNNY

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DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	13.0	8.4	79 %
1.0	13.0	8.4	79 %
2.0	13.0	8.4	79 %
3.0	12.8	8.2	76 %
4.0	12.6	8.2	76 %
5.0	12.0	7.8	71 %
6.0	9.0	5.8	49 %
7.0	7.0	2.4	20 %
7.5	6.5	2.4	19 %
8.0	6.5	1.8	14 %
			}

COMMENTS:

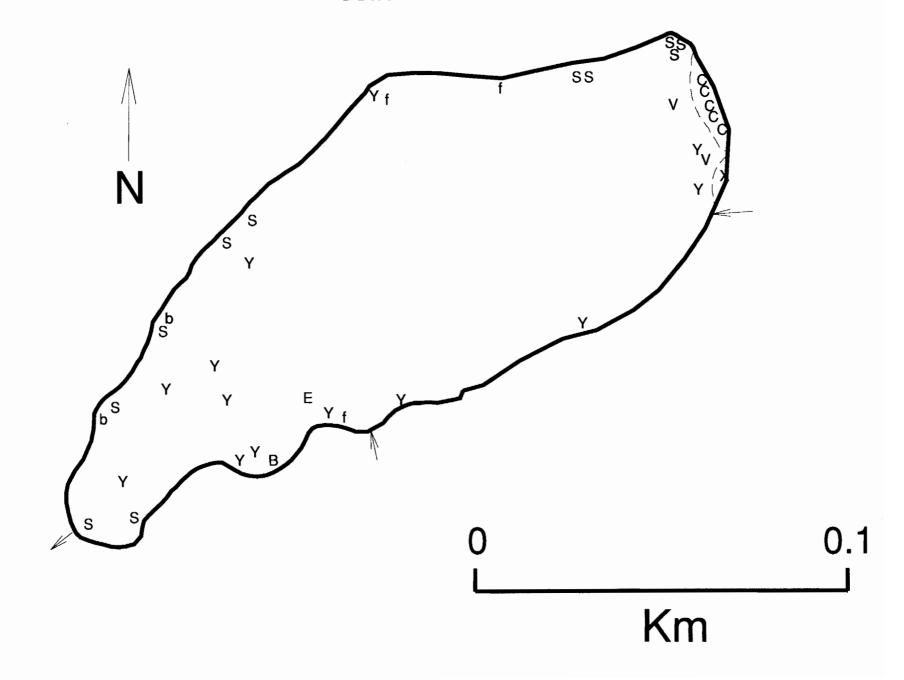
SECCHI DISK (m): 4.3

BOTTOM DEPTH (m): 8.2

TIME: 900

*Dissolved oxygen values are in mg/L

Carrigain Pond



AQUATIC PLANT SURVEY

LAK	E: CARRIGAIN POND	TOWN: LINCOLN	DATE: 08/23/94	
Key	PLANT	ADUNDANGE		
wey	GENERIC	COMMON	ABUNDANCE	
Y	Nuphar	Yellow water lily	Sparse	
В	Brasenia schreberi	Water shield	Sparse	
E	Eriocaulon septangulare	Pipewort	Sparse	
v	Vallisneria americana	Tape grass	Sparse	
С	Cyperaceae	non-flowering sedge	Sparse	
S	Sparganium	Bur reed	Sparse	
b	Scirpus	Bulrush	Sparse	
f	Chlorophyceae	Filamentous green algae	Sparse	
х		Sterile thread-like leaf	Sparse	
		OVERALL ABUNDANCE:	Scattered	

GENERAL OBSERVATIONS:

- 1. Sedges and sterile thread-like leaves were abundant along the eastern shoreline.
- 2. Leatherleaf and high-bush blueberries surrounded the entire pond but are not depicted on the map.